

We claim:

1. Dye-containing polymer particles containing at least one dye  
5 in a matrix of an essentially water-insoluble polymer and having an average particle size within the range from 5 to 500 nm and a particle size distribution width (variance) of  $\leq 40\%$ .
- 10 2. Polymer particles as claimed in claim 1 having an average particle size within the range from 50 to 300 nm.
3. Polymer particles as claimed in claim 1 or 2 having a particle size distribution width of  $\leq 35\%$ .
- 15 4. Polymer particles as claimed in any of the preceding claims, wherein the polymer contains (in each case based on the total weight of the polymer) from 30 to 100% by weight of at least one polymer a, from 0 to 80% by weight of at least one  
20 monomer b having polar groups and from 0 to 30% by weight of at least one further monomer c, different than monomer a, in polymerized form.
5. Polymer particles as claimed in claim 4, wherein the monomer  
25 a is selected from the group consisting of esters of  $\alpha,\beta$ -ethylenically unsaturated  $C_3$ - $C_8$  monocarboxylic acids or  $C_4$ - $C_8$  dicarboxylic acids with  $C_1$ - $C_{12}$  alkanols, vinyl esters of  $C_1$ - $C_{12}$  monocarboxylic acids, aromatic vinyl compounds and  $C_2$ - $C_6$  olefins.
- 30 6. Polymer particles as claimed in claim 4 or 5, wherein the monomer b is selected from the group consisting of  $\alpha,\beta$ -ethylenically unsaturated  $C_3$ - $C_8$  monocarboxylic acids,  $\alpha,\beta$ -ethylenically unsaturated  $C_4$ - $C_8$  dicarboxylic acids, the  
35 monoesters with  $C_1$ - $C_{12}$  alkanols and anhydrides thereof, aromatic vinylcarboxylic acids, monoethylenically unsaturated sulfonic and phosphonic acids, esters of  $\alpha,\beta$ -ethylenically unsaturated  $C_3$ - $C_8$  monocarboxylic acids with  
40 amino- $C_2$ - $C_8$ -alkanols, mono- $C_1$ - $C_4$ -alkylamino- $C_2$ - $C_8$ -alkanols or di- $C_1$ - $C_4$ -alkylamino- $C_2$ - $C_8$ -alkanols, N-vinyl lactams, esters of  $\alpha,\beta$ -ethylenically unsaturated  $C_3$ - $C_8$  monocarboxylic acids with  $C_2$ - $C_8$  hydroxyalcohols and the ethoxylated or propoxylated  
45 derivatives thereof.

7. A process for preparing dye-containing polymer particles containing at least one dye in a matrix of an essentially water-insoluble polymer and having an average particle size within the range from 5 nm to 5  $\mu$ m, which comprises
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- a) precipitating the polymer particles from a solution of the polymer and of the dye in a water-miscible organic solvent by addition of an aqueous phase; or
- 10 b) emulsifying a solution of the polymer and of the dye in a water-immiscible organic solvent in an aqueous phase and precipitating the polymer particles by removing the organic solvent.
- 15 8. A process as claimed in claim 7, wherein the precipitating of the polymer particles is effected in the presence of a protective colloid.
9. A colorant comprising the dye-containing polymer particles as
- 20 claimed in any of claims 1 to 6, optionally together with customary auxiliary and additive substances.
10. A colorant as claimed in claim 9 in the form of an ink-jet ink preparation comprising the dye-containing polymer
- 25 particles as claimed in any of claims 1 to 6 dispersed in an aqueous medium.
11. The use of the dye-containing polymer particles as claimed in any of claims 1 to 6 for printing print media, especially
- 30 paper, foil, film, papers for the reproduction of digital photographic images and graphics, and also for printing textiles, especially by transfer printing.

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